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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,116	02/22/2000	Anthony D Minervini	804RP746	2137

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BELL, BOYD & LLOYD LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER

EASTHOM, KARL D

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 09/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/510,116

Applicant(s)

MINERVINI ET AL.

Examiner

Karl D Easthom

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 8, 10-16, 18-32 and 38-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16, 18-32 and 38-42 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-8 and 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7-8, and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-266105, in view of Niihara et al. (JP 6-69416), or McGuire et al. '403 . JP '105 discloses the claimed invention at the abstract and Fig 6, except the PTC thermistor elements being polymer. JP '105 discloses insulating substrates 16, 17 with PTC elements 11, and wrap around electrodes 23. Niihara discloses circuit mounting of polymer PTC resistors and discloses the latter are useful for replacing ceramic thermistors such as that of Sunuhara at par. 16 in order to from a reduced size. McGuire discloses that ceramic and polymer thermistor devices are well known for current protection at col. 1, the latter useful in order to reduce the size. It would have been obvious to substitute one well known material for another where both are PTC circuit protection devices, where one has certain advantages such as reduced size, and polymer devices need not be sintered as ceramics. As to claim 7, ceramic, dielectric or other material is disclosed at the top of col. 8 of McGuire, and where copper is disclosed for the electrodes at col. 5, lines 5-12, the insulating layer is deemed a copper clad PC board since it can be used as a PC board and no other printed circuits are claimed. It would have been obvious to replace the well known equivalent materials in the electrical resistor arts for each other where the references each disclose chip thermistors. In claim 11, the third substrate is 17 on the bottom. As to claims 14-15, the multiple layer foils are disclosed as a known electrode for polymers in McGuire as 100,150,180 for example, so that it would have been obvious to employ the

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materials that are known to be compatible with metal foils. In claim 13, the current flows from one end termination 14 to end termination 14, via PTC element 11 and electrode 13 as claimed.

In claim 11, the thermistors are in parallel.

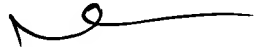
3. Claims 16, 18-32 and 38-42 are allowed.

4. Applicant's arguments filed 1/6/03 have been considered but they are persuasive only as to Sunahara. That is particularly, the Sunahara insulative supporting substrates are all connected together via each other as argued and so the two-three germane ones of the claims are not separate as claimed. Applicant argues there is no suggestion for replacing ceramic PTC materials for polymer PTC materials. This is not correct. The two materials are known replacements for one another as noted above in the art applied. Applicant has argued with respect to JP 9-199302. The examiner stated that Fig. 6 discloses insulating layers 17 with PTC elements 11, and wrap around electrodes 23. This appears only in Fig. 6 of JP 9-266105, so that the examiner apologizes for the typographical error of citing JP 9-199302. The two references were the only two references cited by applicant on the most recent IDS of 12/26/02. With all due respect, the examiner deems it apparent that the previous action contained a typographical error given the fact that applicant cited each reference in the most recent IDS prior to the previous action, there were only two choices in that IDS - JP 9-266105 and 9-199302, applicant has a continuing duty under CFR rules to distinguish all art in the record, and casual inspection of JP' 302 Fig. 6 reveals it does not have the elements recited but that JP'105 Fig. 6 does. Hence, this is not a new rejection, but a correction of the obvious typographical error of the previous action.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is 703 308-3306. The examiner can normally be reached on M-Th, 5:30AM-4:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308-7722 for regular communications and 703 308-7722 for After Final communications.


Karl D Easthom
Primary Examiner
Art Unit 2832

KDE
September 11, 2003
